

CLAIMS

We claim:

- 5 1. A composition for chemical mechanical planarization comprising an aqueous solution of ozone and abrasive particles.
- 10 2. A composition as in claim 1 wherein said abrasive particles are selected from the group consisting of alumina, silica, ceria, spinel, zirconia and mixtures thereof.
- 15 3. A composition as in claim 1 further comprising at least one additive selected from the group consisting of carbonate, bicarbonate, oxalic acid, formic acid, acetic acid, glycol acids and mixtures thereof.
4. A composition as in claim 1 wherein the concentration of ozone in said aqueous solution is less than that at which ozone interactions occur.
- 20 5. A composition as in claim 4 wherein said concentration of ozone is less than about 20 parts per million.
6. A composition as in claim 1 further comprising at least one ammonium salt.
- 25 7. A composition as in claim 6 wherein said at least one ammonium salt is ammonium carbonate.
8. A method of planarizing a surface by directing ozone gas onto said surface .
- 30 9. A method of planarizing a surface by directing onto said surface an aqueous solution containing ozone and causing relative motion of said surface and a polishing pad in contact therewith.

10. A method as in claim 9 further comprising abrasive particles in said aqueous solution.
11. A method as in claim 10 wherein said abrasive particles are selected from the group
5 consisting of alumina, silica, ceria, spinel, zirconia and mixtures thereof.
12. A method as in claim 10 further comprising at least one ammonium salt.
13. A method as in claim 12 wherein said at least one ammonium salt is ammonium
10 carbonate.

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